

DOCUMENT RESUME

ED 449 937

RC 022 792

AUTHOR Cajete, Gregory A.
TITLE Igniting the Sparkle: An Indigenous Science Education Model.
ISBN ISBN-1-882308-66-2
PUB DATE 1999-00-00
NOTE 233p.
AVAILABLE FROM Kivaki Press, P.O. Box 1053, Skyland, NC 28776; Tel: 800-578-5904; email: Kivaki@Cheta.com (\$24.95).
PUB TYPE Books (010) -- Reports - Descriptive (141)
EDRS PRICE Document Not Available from EDRS.
DESCRIPTORS *American Indian Education; *Cognitive Style; *Cultural Context; Cultural Differences; *Culturally Relevant Education; Educational Change; Elementary Secondary Education; Holistic Approach; *Indigenous Populations; Integrated Curriculum; *Science Curriculum; Science Education; World Views
IDENTIFIERS American Indian Students; Eurocentrism; *Indigenous Knowledge Systems

ABSTRACT

This book describes a culturally responsive science curriculum that the author has been teaching for 25 years. The curriculum integrates Native American traditional values, teaching principles, and concepts of nature with those of modern Western science. Every Indigenous culture has an orientation to learning that is metaphorically represented in its art forms, its way of community, its language, and its way of understanding itself in relationship to its natural environment. Native Americans and other Indigenous peoples have historically applied the thought process of creative science within cultural contexts, which are holistic. In most schools, science is taught from a Western cultural perspective that is preoccupied with specifics to the exclusion of contexting within wholes. Thus there is a mismatch between cultural perspectives that results in many young Native Americans and other Indigenous students becoming alienated from science. The learning styles of Native Americans are explained, and an overview of Indigenous science is presented. Later chapters examine science as a cross-cultural discipline, the creative process in science and the Native American learner, and wholism and the general systems theory and how they are mirrored in Native American ritual and myth. Finally, the model presents an approach for synthesizing the appropriate research on Native American and Indigenous cultural sciences into a form and content that is readily usable by teachers of Native American students. Two appendices present areas for further research and the seven syllabi for the "Science from a Native American Perspective" curriculum. (Contains 187 references.) (TD)